LOW-EFFECT HABITAT CONSERVATION PLAN

FOR THE

ISSUANCE OF AN INCIDENTAL TAKE PERMIT UNDER SECTION 10(a)(1)(B) OF THE ENDANGERED SPECIES ACT

FOR THE

FEDERALLY ENDANGERED STEPHENS' KANGAROO RAT

ON

BEAUMONT POTRERO CREEK AND BEAUMONT LABORDE CANYON PROPERTIES, RIVERSIDE COUNTY, CALIFORNIA

Prepared by:
Tetra Tech, Inc.
3475 East Foothill Blvd.
Pasadena, CA 91107

Prepared for:
Lockheed Martin Corporation
2550 North Hollywood Way, Suite 301
Burbank, CA 91505

May 10, 2005

EXECUTIVE SUMMARY

Lockheed Martin Corporation (applicant) has applied for a permit from the U.S. Fish and Wildlife Service (Service) pursuant to section 10(a)(1)(B) of the Endangered Species Act of 1973 (Act) as amended (16 U.S.C. 1531 *et seq.*) to incidentally take the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*; "SKR"). The incidental take is anticipated to occur as a result of groundwater and soils contaminant investigation activities proposed at the Potrero Creek (Site 1) and Laborde Canyon (Site 2) properties, Riverside County, California. The proposed plan areas consist of 11,785 total acres with less than three (3) acres of area permanently or temporarily affected. SKR have been found at both sites.

The desired term of the low-effect permit is five (5) years, which is expected to cover the duration of the applicant's environmental investigations at Sites 1 and 2. The objective of the investigations is to determine and characterize the potential presence of contamination in soils and groundwater at the sites with the results serving as the basis for determining the appropriate method(s) of remediation for affected areas. Along with the minimization measures listed in this Habitat Conservation Plan (HCP), the applicant will also mitigate areas of investigation by filling boreholes and abandoned wells, and the footprint of disturbance will be restored to pre-disturbance conditions. The applicant's overall goal is the restoration of areas affected by investigation for the benefit of local wildlife and future human recreational use.

This HCP has been prepared in consultation with the Service to fulfill the requirements of a section 10(a)(1)(B) Permit application for the proposed project.

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose and Need

Lockheed Martin (applicant) proposes to conduct groundwater and soils contaminant investigations on properties known to be occupied by the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi;* "SKR"). These actions are in response to a consent order (No. 88/89-034) issued by the California Department of Toxic Substances Control (DTSC) to characterize the presence of contamination in groundwater and soils at Sites 1 (Figure 1) and 2 (Figure 2). Lockheed Martin is seeking a permit for incidental take of SKR in the course of otherwise lawful activities associated with the contaminants investigations. Such authorization is necessary because activities associated with the investigation of groundwater and soils contaminants may result in incidental take by injury or death of SKR or through modification of SKR habitat despite the minimization and mitigation measures proposed in this Habitat Conservation Plan (HCP).

1.2 Regulatory Requirements

The Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), provides for the protection and conservation of fish, wildlife and plants that have been federally listed as threatened or endangered. Activities otherwise prohibited by section 9 of the Act and subject to the civil and criminal enforcement provisions of section 11 of the Act may be authorized for Federal entities pursuant to the requirements of section 7 of the Act and for other persons pursuant to section 10 of the Act.

Section 10(a)(2)(A) of the Act states that no permit may be issued authorizing any taking referred to in Section 10(a)(1)(B) unless the applicant submits to the Secretary (the Secretary of the Interior) a Habitat Conservation Plan (HCP) that specifies:

1. The impact which will likely result from such taking;
2. What steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps;
3. What alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and
4. Such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan; and

The Service has determined this document to be a "low-effect" HCP. A low-effect HCP is one "involving: (1) minor or negligible effects on federally-listed, proposed or candidate species and their habitats … and (2) minor or negligible effects on other environmental values or resources. 'Low-effect' incidental take permits are those permits that, despite their authorization of some small level of incidental take, individually or cumulatively have a minor or negligible effect on species covered …" (Service/NOAA 1996).

This HCP has been prepared in consultation with the Service to fulfill the requirements of Section 10(a)(2)(A) of the Act as part of a Section 10(a)(1)(B) take permit being sought for the proposed groundwater and soils contaminants investigations in the County of Riverside, California.

1.3 Permit Applicant

Lockheed Martin Corporation is the applicant for the incidental take permit.

1.4 Site and Project Description

The plan area consists of two (2) nonadjacent properties, Potrero Creek (Site 1) and Laborde Canyon (Site 2), which encompass 11,785 acres in northwest Riverside County. The area surrounding the plan area can be characterized by rural and suburban development intermixed with agricultural operations and large blocks of undeveloped land. Site 1 is a 9,117-acre property that comprises the southern portion of the City of Beaumont, California. Site 2 is a 2,668-acre property that is located in an unincorporated area approximately 1¼ mile to the northwest of Site 1. Both sites are in vacant, open space conditions and can be generally characterized by hilly topography with associated drainages and valley bottom areas. Site 1 was originally owned entirely by the applicant. The State of California (State) now owns 8,552 acres of Site 1, and the applicant retains the remaining 565 acres as a conservation easement. Pursuant to the *Purchase and Sale Agreement and Escrow Instructions* dated December 22, 2003, between Lockheed Martin Corporation and the State, LMC continues to be responsible for and assumes environmental obligations with respect to the State-owned portion of Site 1 as well as LMC's conservation easement. In order for LMC to perform its environmental obligations, the State granted an access easement to LMC to access the State-owned portion of Site 1 and cross the property in order to access the conservation easement. The access easement, dated December 31, 2003, is included in the *Purchase and Sale Agreement and Escrow Instructions*. Site 2 is owned entirely by the applicant. Although the plan area is approximately 11,785 total acres in size, less than three (3) acres of area will be permanently (~0.267 acres) or temporarily (~2.4 acres) affected by the investigation activities. SKR have been found at both sites.

The findings of previous biological surveys conducted by Pacific Southwest Biological Services, Inc. (1983), ERCE (1990), Daniel J. Grout (1991, 1992, 1998, 1999, 2000, 2003, 2004), S.J. Montgomery (1991, 1992, 1995a, and 1995b), and SJMBC (1998, 2000) indicate that Sites 1 and 2 have the potential to support several sensitive and/or listed species of wildlife. Site 1 could potentially support five (5) species of wildlife that are listed as threatened or endangered – least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), coastal California gnatcatcher (*Polioptila californica californica*), SKR, and arroyo toad (*Bufo californicus*). Of the five species that could occur on Site 1, only the SKR and least Bell's vireo have been observed on the site. No activities will be conducted in riparian areas so no take of least Bell's vireo is anticipated.

Sensitive species, which are species that are unlisted but declining in numbers, known to occur on Site 1 include the orange-throated whiptail (*Cnemidophorus hyperythrus*), San Diego horned

lizard (*Phrynonsoma coronatum blainvillei*), western spadefoot toad (*Scaphiopus hammondi*), ferruginous hawk (*Buteo regalis*), northwestern San Diego pocket mouse (*Chaetodipus fallax*), tri-colored blackbird (*Agelaius tricolor*), and the northern red-diamond rattlesnake (*Crotalus ruber ruber*). The unlisted Los Angeles pocket mouse (*Perognathus longimemberis brevinasus*) may occur along the washes and sandy benches along Potrero and Bedsprings creeks on Site 1, as it is known to occur at the mouth of Massacre Canyon.

The previous biological surveys also indicate that Site 2 could potentially support two (2) federally listed species – SKR and coastal California gnatcatcher. However, the SKR is the only species known to occur on the site. Much of the habitat in the Badlands area, including the subject properties, has degraded significantly over the last fifty years due to exotic weed invasions and repeated fires, to the point where the majority of the former scrub habitat has converted to non-native annual grassland. Therefore, the probability of individual gnatcatchers inhabiting the site is expected to be extremely low (Kevin Clark, U.S. Fish and Wildlife Service, pers. comm., December 2004). Therefore, no take of gnatcatchers is anticipated from this project. Two (2) sensitive species have been observed on Site 2, the northern red-diamond rattlesnake and San Diego pocket mouse.

The vegetation of both sites is a mix of native and non-native species, whose distribution and abundance vary across the sites. Based on general biological surveys conducted by Chambers Group at Sites 1 and 2 in 2003, the following five (5) vegetation communities are present within the plan area: Riversidean Sage Scrub, Riversidean Alluvial Fan Sage Scrub, Chamise Chaparral, Southern Willow Scrub and Non-native Grasslands (Chambers Group 2003). While Sites 1 and 2 have the potential to support plant species listed as threatened or endangered by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), none have been observed on the sites during previous surveys.

The objective of the proposed investigation activities is to determine and characterize the potential presence of contamination in soils and groundwater at the sites with the results of the investigations serving as the basis for determining the appropriate method(s) of remediation for affected areas. The applicant's overall goal is the restoration of the areas affected by investigation for the benefit of local wildlife and future human recreational use of Site 1 and future open space land use of Site 2.

Proposed contaminant investigation activities consist of the following:

1. Conduct quarterly groundwater level measurements, sampling, and repair at groundwater wells in Sites 1 and 2;

2. Install and develop up to 50 additional groundwater wells (4-inch diameter) as needed at Sites 1 and 2 for groundwater sampling and monitoring, and performing pilot studies;

3. Abandon approximately 20 groundwater wells (production and monitoring) at Sites 1 and 2, which may require excavating the top five feet of soil to cut the well casing;

4. Perform routine maintenance of existing structures at both sites and groundwater treatment system at Site 1;

5. Maintain roads (*e.g.*, repair, limited grading, widening, and enhancement / reestablishment of routes to improve access, if necessary) at Sites 1 and 2;

6. Mark, survey (geophysical), and drill approximately 400 soil assessment boreholes (8-inch diameter) for collection of soil samples for contaminant and geotechnical analysis at Sites 1 and 2;

7. Install and sample up to 200 temporary soil gas probes at selected borehole locations at Sites 1 and 2 for soil gas characterization;

8. Remove inactive catalytic oxidizer (CatOx) unit at Site 1 using a front loader and/or crane to lift components onto transport vehicles for offsite disposal;

9. Deposit non-hazardous soils and broken-up concrete from drilling, excavation, and road maintenance activities onsite;

10. Mow work areas by hand operated equipment or small tractor;

11. Survey the locations/boundaries of investigation activities (boreholes, wells, excavations, etc.) at Sites 1 and 2 using land-based surveying equipment or GPS technology;

12. Perform subterranean unexploded ordnance (UXO) surveys in selected historical, ballistics testing areas at Site 1 using electromagnetic conductivity equipment either drawn by hand or an all-terrain vehicle, and expose using hand tools any anomalies for visual inspection; and

13. Conduct seismic reflection and / or refraction surveys at Sites 1 and 2 that consist of placing sensors at 10 to 15 foot intervals along seismic test lines (typically 400 to 800 feet in length) and dropping a weight on a metal plate approximately 10 times, at 30 second intervals, at each sensor location.

It should be noted that the aforementioned activities, with the exception of existing structure maintenance and groundwater level measurement, may also include performing one or more of the following activities off the existing roadways: 1) driving of vehicles, 2) temporary staging of vehicles and/or equipment (*e.g.*, decontamination trailer, bobcat steer loader, and drums), and 3) temporary parking of vehicles. While these activities will be conducted over the course of

approximately five years, all activities will only be conducted during daylight hours, and the majority of individual activities will be of short to medium duration, ranging from one day (*e.g.*, CatOx unit removal) to several weeks (*e.g.*, borehole marking, surveying, and drilling). Other activities will be performed in short increments, ranging from two days to four weeks, for the duration of the permit period (*e.g.*, quarterly groundwater monitoring and semiannual groundwater sampling).

The investigation activities listed in this section are the only activities covered by this HCP. Contamination remediation that may affect Federal and State-listed threatened and endangered species will be addressed separately from this HCP through the appropriate regulatory process.

2.0 STEPHENS' KANGAROO RAT

2.1 Species Account

SKR is the only federally listed species known to occur within the disturbance footprint of the project area. SKR was listed as endangered on September 30, 1988 (53 *Federal Register* 38465) by the USFWS and as threatened by California Department of Fish and Game in 1971. Critical habitat has not been designated for this species. SKR, a rodent of the family Heteromyidae, is 1 of 21 species of kangaroo rats (genus *Dipodomys*) (Williams *et al.* 1993). The Stephens' kangaroo rat is medium sized for the genus. The average adult weight is approximately 70 grams (2.5 ounces), and the total adult body-plus-tail length ranges between 23 and 30 centimeters (9 and 12 inches), with the tail 1.45 times the length of head and body (Bleich 1977). SKR occur in relatively dry inland valleys of the Peninsular Ranges of San Bernardino, Riverside and San Diego counties of southern California and typically inhabits areas characterized by low perennial and annual cover and large areas of bare ground (Grinnel 1933; Lackey 1967; Bontrager 1973; Bleich 1973 and 1977; Bleich and Schwartz 1974; Thomas 1975; O'Farrell *et al.*1986; O'Farrell and Clark 1987; O'Farrell and Uptain 1989; Price *et al.* 1994; Price *et al.* 1995; Goldingay and Price 1997). Typical habitat consists of native and non-native annual herbs (*e.g.*, gold fields and filaree) and native and non-native grasses (*e.g.*, foxtail fescue and foxtail chess).

SKR are solitary and nocturnal (Bleich 1977; O'Farrell 1990). Though SKR are solitary, burrows are frequently found in clusters. SKR may modify and use pocket gopher and California ground squirrel burrows (Thomas 1975). It feeds primarily upon the seeds and vegetative parts of forbs such as filaree and grasses (*e.g.*, *Bromus madritensis rubens* and *Schismus barbatus*) (Lowe 1997). Additional plants documented in the diet of this animal include California buckwheat, common fiddleneck, coastal sagebrush and tarweed (Lowe 1997). The reproductive season for SKR is variable depending on conditions such as amount and timing of rainfall, though it typically centers around late winter (Bontrager 1973; McClenaghan and Taylor 1993).

2.2 Status of the Species

SKR was historically and is currently distributed throughout the inland valleys of the coastal side of the Peninsular Ranges of San Bernardino, Riverside, and San Diego counties of southern California and is found from approximately 27 to 1,280 meters (90 to 4,200 feet) above mean sea level (Grinnell 1922; Lackey 1967; Hall 1981; Bleich 1973; Bleich and Schwartz 1974; O'Farrell and Uptain 1989; O'Farrell *et al.* 1986; Dudek & Associates 1998; Ogden Environmental and Energy Services Co., Inc. 1998). The entire geographic range of SKR was estimated to be approximately 2,870 square kilometers or 287,000 hectares (1,108 square miles) at the time of its listing in 1987 (USFWS 1987).

Large areas of suitable habitat have been lost due to agriculture and more recently urban and industrial development (Price and Endo 1989). During a range-wide study, O'Farrell and Uptain (1989) determined that remaining occupied areas tended to be small (68 sites were less than 40 hectares [100 acres]), and 6 of 79 occupied sites were destroyed prior to completion of the report.

Remaining SKR populations show higher genetic variability among occupied locations than anticipated according to mtDNA analysis (Metcalf *et al.* 2001). Based on topography, Metcalf *et al.* divided the species' range into three geographic regions: northern (Norco, Alessandro Heights, Sycamore Canyon, Lake Mathews, Steele Peak, and Potrero Creek); central (Motte-Rimrock Reserve, San Jacinto, Canyon Lake, Cottonwood Canyon, and Shipley Reserve); and southern (Lake Skinner, Lancaster Valley, Camp Pendleton, Fallbrook, and Guejito). Metcalf *et al.* found that the different geographic regions differ genetically, with the central area having the greatest diversity of genetic lineages. These results suggest that dispersal among occupied sites was historically limited, and effective population sizes were large.

2.3 Assessment of Incidental Take

The proposed project would affect less than three (3) acres of habitat, of which about 0.267 acres would be permanently affected and about 2.4 temporarily affected. The total of these two acreages is approximately 0.10 percent of the estimated 2,637 acres occupied by SKR at Sites 1 (2,488 acres) and 2 (149 acres).

Permanently affected habitat refers to habitat permanently altered due to the installation/ abandonment of physical features, such as groundwater monitoring wells and boreholes, and habitat alteration from existing road maintenance. For example, abandoned groundwater wells and boreholes are backfilled with bentonite slurry and may prevent the recovery of habitat in the area of the feature on the ground surface. The permanent acreage was calculated by summing estimated areas of permanent habitat alteration for each activity type (*e.g.*, well installation and abandonment, boreholes, and existing road maintenance). For example, the calculation for permanent habitat alteration from well installation activities consisted of calculating the area of each 4 inch diameter well at ground surface, which is 0.087 ft^2, multiplying the area by the estimated number of features (0.087 ft^2 x 50 wells = 4.36 ft^2), and converting the result to acres (4.36 ft^2 x 0.000022956 acres/ft^2 = 0.0001 acres). Similar calculations were performed for the other activity types (well abandonment [0.0007 acres], borehole sampling [0.0034 acres], and

existing road maintenance [0.264 acres]), and the resulting acreages were added for a total of 0.267 acres.

Temporarily affected habitat refers to habitat temporarily altered, primarily the flattening of grasses and compression of soils from vehicle traffic. These temporary effects are included in the low-effect HCP to provide coverage for temporary actions that may impact SKR. The acreage of temporarily affected habitat was calculated in a similar manner to that of permanently affected habitat. Estimated areas of habitat that have to be traversed (*e.g.*, the off-road path, if any, to arrive at the work location and the area around the work location that will be traversed during the work activity) during each type of work activity were summed. Using the same example as before, temporary habitat alteration from well installation consisted of estimating the area of the average off-road path to well installation locations, which was 400 ft^2 (20 foot by 20 foot path), multiplying by the number of estimated well locations, 400 ft^2 x 50 wells = 20,000 ft^2, and converting the result to acres (20,000 ft^2 x 0.000022956 acres/ft^2 = 0.45912 acres). Similar calculations were performed for the other activity types and the resulting acreages were added for a total of 2.4 acres.

Temporary and permanent impacts to habitat will total less than 3 acres over the entire project area, and each individual area impacted by the various actions will be relatively small in size (generally measured in square feet as in examples above). Thus, the loss of habitat potentially occupied by SKR in the project area is minor and will not result in loss of foraging or breeding habitat sufficient to result in death or injury to SKR.

However, it is possible that individual SKR may be injured or killed by vehicles driving over and crushing burrows or from direct contact with augers or probes during drilling activities. Due to their burrowing and nocturnal habits, SKR will be underground during the project's activities; therefore, SKR killed or injured will probably not be detected. However, the likelihood of death or injury to SKR is expected to be low since avoidance and minimization measures, such as load-spreading measures and presence of a biological monitor to guide vehicles around burrows, will be implemented. Also, not all areas of the project are occupied by SKR, and in the majority of the occupied areas SKR are present at low densities. Based on 1999/2000 survey data (SJMBC 2000) about 64 percent (1,592 acres) of the occupied habitat (2,488 total occupied acres) is occupied at densities of less than 10 animals per hectare (hectare = 2.47 acres), 32 percent (793 acres) is occupied at 11-30 animals per hectare, and 4 percent (103 acres) is occupied at greater than 31 animals per hectare. Hence, the likelihood of killing or injuring individual SKR during project activities is small and not likely more than two to three SKR will be killed or injured by project activities. The proposed temporary trapping, holding and release program will further minimize deaths or injuries from the project. While temporary trapping of animals could lead to injury or death, the likelihood of this occurring is also extremely low since the trapping and holding will be done only by experienced biologists familiar with SKR capture techniques. It is anticipated that the trapping program will capture, hold and release from 10 to 20 SKR. The project is not expected to affect any proposed or candidate wildlife species or their habitats.

3.0 HABITAT CONSERVATION PLAN

This HCP has been prepared to support groundwater and soils contaminant investigations on two parcels of land owned or formerly owned by Lockheed Martin Corporation in Riverside County, California. The purpose of the HCP is to minimize to the maximum extent practicable and mitigate the effect of these investigations on SKR and SKR habitat at the project sites. The biological objective is to leave untouched approximately 99.90% of the SKR habitat on the plan area by limiting the impacts to less than 3 acres (~0.10% of SKR habitat). Of the total estimated affected area, approximately 0.267 acres will be permanently modified due to road maintenance, and borehole and well drilling and backfilling activities. The remaining approximately 2.4 acres will be temporarily impacted by vehicles and/or equipment traversing habitat.

3.1 Permit Duration

The duration of the section 10(a)(1)(B) permit for this project is five (5) years from the date of issuance. This permit allows the permittee (Lockheed Martin Corporation) or their successors to incidentally take, either directly or indirectly, Stephens' kangaroo rat within the geographical boundaries identified in the HCP over that time period. The permit may only be transferred consistent with 50 CFR part 13 section 13.25, which requires that 1) the permittee and proposed transferee apply for a permit transfer (through the submission of an assumption agreement between the two parties); 2) the proposed transferee meets all the qualifications for holding a permit; 3) the transferee provides written assurances that it can meet the financial obligations and will implement the terms and conditions of the permit, including any outstanding mitigation requirements; and 4) that the transferee provides any additional information the Service deems necessary. After expiration of this Permit, any take of SKR within the said geographic boundaries requires re-authorization.

3.2 Actions to Minimize Impacts

The following are measures that will be implemented to minimize the impacts of the investigations:

1. A Service approved biologist (biological monitor) will perform pre-activity surveys to identify the location of SKR habitat and active burrows;
2. All activities will be completed during daylight hours;
3. All activities will be supervised by a Service approved biologist;
4. An orientation program about SKR and avoidance and minimization measures will be provided to project workers during tailgate safety meetings;
5. Burrows will be flagged to aid workers in burrow avoidance, and the flags will be removed when the task is completed;
6. All equipment will be guided by the Service approved biologist to avoid active SKR burrows as much as possible using the following priority for establishing the route: 1) the existing road network; 2) existing tracks, trails, or areas with compacted soils; 3) existing bare areas; or 4) if off-road, the shortest route having the least amount of native vegetation and the smallest number of active SKR burrows;

7. All off road vehicle or equipment traffic will be limited to the same path in and out, will move slowly, and will be turned in gentle arching motions to minimize impacts to the ground surface;
8. Mower blades will be elevated 4 to 6 inches above the ground surface and be limited to the smallest area possible to protect burrow sites;
9. In establishing parking and staging areas, the Service approved biologist will select the parking and/or staging area using the following priority: 1) the existing road network; 2) existing tracks, trails or areas with compacted soils; 3) existing bare areas; or 4) if off-road, the area that has the least amount of native vegetation and the smallest number of active SKR burrows;
10. If burrows are present in a parking or staging area, large sheets of metal or plywood will be placed under the vehicles and/or equipment to spread the weight and will be removed following use;
11. Parking of vehicles and staging of equipment overnight will be restricted to existing roads;
12. Drilling/boring will be restricted, to the maximum extent possible, to 15 feet or more from active SKR burrows;
13. If burrows cannot be avoided, load-spreading measures will be placed over the burrows for vehicles and/or equipment setup and movement; and
14. If more than load-spreading measures are required to avoid a significant amount of take (*e.g.*, during well abandonment and road repair), then trapping will be performed by a Service approved biologist. Trapping will consist of the following tasks: 1) The area of potential impact will be temporarily fenced using a 2-foot high plastic wood-staked soil erosion fence buried 12 inches deep, fencing will be removed after activities possibly resulting in take are completed; 2) SKR live-trapping will be conducted within the impact area 3-5 days prior to the disturbance activity, and all SKR trapped will be held in clean ventilated terrarium containers; 3) all SKR will be released at their capture site the evening after the activity is completed, but no SKR will be held any longer than 7 days. If the original burrows were destroyed by the activity, new burrows will be drilled into a suitable area within 100 feet of the trap location prior to the release of the SKR; and 4) to the maximum extent practicable, SKR trapped will be immediately released to the habitat adjacent to the excluded area, if suitable habitat to support SKR exists. This will remove the possibility of death or injury from holding the animal(s) in a terrarium.

3.3 Actions to Mitigate Impacts

Mitigation will consist of refilling boreholes and smoothing of soils disturbed during investigation activities. Due to the very small individual footprints of these activities, no additional mitigation measures are proposed or deemed necessary.

3.4 Monitoring, Management and Reporting

Annual Monitoring Reports will be submitted by the biological monitor to USFWS and CDFG by February 1 each year for the duration of the permit, specifying the acreage of annual impacts to SKR habitat, the results of the SKR monitoring program (*e.g.*, mapping surveys and trapping), and the compliance with the avoidance, minimization and mitigation activities covered by this five-year permit.

Mapping of SKR occupied habitat (with density categories) will be conducted by the biological monitor within 100 feet of the work areas at both sites and within the 565 acres of the applicant-owned property on Site 1 at the initiation of the low-effect HCP. At the completion of the contaminant investigation activities, the SKR mapping areas will be updated and will be compared with the initial mapping performed to report any increase or decrease in SKR-occupied acreage or density levels. The results of the SKR mapping survey and comparison will be presented as part of the HCP annual monitoring reports.

3.5 Funding

The applicant shall fund and perform the mitigation, monitoring, management, and reporting programs of the HCP in accordance with Section 3.0 of the HCP.

The applicant shall fund implementation of the HCP in accordance with the provisions of the HCP applicable to it, by use of the executed Purchase Order Line Item (PO Line Item) issued by the applicant and attached as Attachment A. The PO Line Item is the final authority required in order to commit funding by the applicant. The applicant has guaranteed the funding authorized by the PO Line Item through Corporate Guaranty executed by the applicant and also included in Attachment A. Said guaranty assures USFWS that the applicant will provide the funding to implement its obligations under the HCP.

By executing this Agreement, the applicant commits to fully fund implementation of those provisions of the HCP. Funding will be made available by the applicant through annual appropriations approved by the applicant's Vice President of Energy, Environment, Safety, and Health (VP, EESH) and Corporate Controller. Funds have been made available for expenditure in fiscal year 2005 to implement the applicant's obligations under the HCP, and the budget has been approved by the applicant's VP, EESH and Corporate Controller. After 2005 funding will be made available annually for the duration of the permit.

The funding estimates included in Attachment A represent the applicant's reasonable estimates of the costs of fulfilling its respective obligations under the HCP. It is understood that costs of implementing the HCP may exceed these estimates. Therefore, notwithstanding the estimates contained in Attachment A, the applicant shall provide funding in the actual amounts necessary to carry out its obligations under the HCP.

The applicant is committed to fund and otherwise provide for the management of the conservation of the SKR as set forth in Section 3.4 of the HCP.

4.0 CHANGED CIRCUMSTANCES

"Changed circumstances" means changes in circumstances affecting the SKR or the geographic area covered by the HCP that can reasonably be anticipated by Lockheed Martin and reasonably be planned for in the HCP (*e.g.*, the listing of a new species, or a fire or other natural catastrophic event in areas prone to such event). Changed circumstances are not Unforeseen Circumstances.

The changed circumstances identified in this HCP are the detection of a listed species not previously known to occupy the area, listing of a new species, or the designation of critical habitat. In the event that a non-covered species that may be affected by the proposed activities is detected or becomes listed under the Act, Lockheed Martin will implement "no take/no jeopardy" and/or "no adverse modification" measures identified by the Service until the permit is amended to include such species, or until the Service notifies Lockheed Martin that such measures are no longer needed to avoid jeopardy to, take of, or adverse modification of critical habitat of the non-covered species. Critical habitat for SKR is not likely to be designated at Potrero Creek or Laborde Canyon because SKR-occupied areas within the properties are anticipated to be managed by the State of California for the benefit of SKR and other wildlife species. No other changed circumstances such as catastrophic fires that would imperil the continued existence of SKR as a species are foreseen at this time because of the relative short five-year duration of the permit.

5.0 UNFORESEEN CIRCUMSTANCES

Unforeseen Circumstances are discussed in the Department of the Interior's "Habitat Conservation Plan Assurances ('No Surprises') Final Rule," issued February 23, 1998 (Federal Register vol. 63, no. 35). Pursuant to the provisions of the "No Surprises Policy," in the event Unforeseen Circumstances affect a species covered by this HCP, the Permittee will not be required to provide additional mitigation which requires the commitment of additional lands, water, or financial compensation, or additional restrictions on use of lands, water, or other natural resources beyond the level otherwise agreed upon for the species covered by the conservation plan without the consent of the Permittee. Should Unforeseen Circumstances arise, changes will be limited to modifications within conserved habitat areas, if any, or to the conservation plan's operating conservation program, if any, for the affected species, and maintain the original terms of the conservation plan to the maximum extent possible. The assurances contained in the "No Surprises Policy" apply only if the Permittee has complied with its obligations under the HCP.

6.0 AMENDMENT PROCESS

6.1 Minor Amendments

Any party may propose minor modifications to the HCP by providing notice to all other parties. Such notice shall include a statement of the reason for the proposed modification and an analysis of its environmental effects, including its effects on operations under the HCP and on covered species. Minor amendments are permissible without amending the underlying section 10(a)(1)(B) permit provided that the Service determines that the changes do not: 1) cause

additional take of SKR that was not analyzed in connection with the original HCP; 2) result in operations under the HCP that are significantly different from those analyzed in connection with the original HCP, or 3) have adverse effects on the environment that are new or significantly different from those analyzed in connection with the original HCP.

Minor amendments to this HCP may include corrections of typographic, grammatical, and similar editing errors that do not change the intended meaning or corrections to any maps or exhibits to correct errors in mapping or to reflect previously approved changes in the permit or HCP. All minor amendments proposed by the Permittees to this HCP will be submitted to the Service in writing.

6.2 Formal Amendments

Amendments that do not fit the definition of a minor amendment will be processed as formal amendments in accordance with all applicable legal requirements, including but not limited to the Federal Endangered Species Act, the National Environmental Policy Act, and the Service's permit regulations. Formal permit amendments require written notification to the Service and the same justification and supporting information for compliance with a standard incidental take permit application, including conservation planning requirements and compliance with issuance criteria.

When the Service or Lockheed Martin believes that a formal amendment to the HCP is required, consultation with the Service will include the Service's Regional and California /Nevada Operations Offices. Lockheed Martin will prepare the appropriate documentation for submission to the Service. The documentation will include a description of the event or activity and an assessment of its impacts. The amendment will describe changes to the mitigation measures to ensure that SKR is appropriately protected.

7.0 PERMIT RENEWAL OR EXTENSION

The permit may be renewed or extended with the approval of the Service. The request to renew or extend the permit must be submitted in writing by the applicant and reference the permit number; certify that all statements and information in the original application are still correct or include a list of changes; and provide specific information concerning what take has occurred under the existing permit and what portions of the project are still to be completed. The request must be made to the USFWS's Carlsbad Fish and Wildlife Office at least 30 days prior to the permit's expiration date. As long as the request is received within 30 days prior to the permit expiration date, the permit shall remain valid while the renewal or extension is being processed. The renewal or extension may be approved in writing by the Deputy Manager of the Service's California/Nevada Operations Office. Changes to the HCP that would qualify as a formal amendment will be handled in accordance with section 6.2.

8.0 OTHER MEASURES

Section 10(a)(2)(A)(iv) of the ESA states that a HCP must specify other measures that the Director may require as being necessary or appropriate for purposes of the plan. When

conservation plans involve multiple parties, the Service may require that an Implementing Agreement be drafted and signed by each party to the HCP. The Service has determined this document to be a "low-effect" HCP with negligible or minor effects on listed species, whereby an Implementation Agreement is not required. No other measures that the Director may require have been identified for this HCP.

9.0 ALTERNATIVES TO THE PROPOSED ACTION CONSIDERED

This alternatives analysis compares the effects of two alternatives to the proposed permit. The following are considered the most reasonably feasible project alternatives: (1) the "no project" alternative and (2) the "trenching" alternative.

9.1 No Project Alternative

An alternative of not conducting investigations at the sites was considered. Pursuing this alternative would prevent understanding of the existence and extent of contamination of groundwater and soils. Additionally, failure to perform the investigation activities would place the applicant in non-compliance with the DTSC consent order issued for the sites. As a result, this alternative was not selected.

9.2 Trenching Alternative

Collection of soil samples by trenching was considered as an alternative to the proposed drilling for the soil assessment portion of the project. This alternative was not selected as it was determined that trenching would result in greater impacts to biological resources at the sites.

10.0 DEFINITIONS

Endangered Species – "…any species [including subspecies or qualifying distinct population segment] which is danger of extinction throughout all or a significant portion of its range." [Section 3(6) of ESA]

Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1513-1543) - Federal legislation that provides means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, and provides a program for the conservation of such endangered and threatened species.

Habitat – The location where a particular taxon of plant or animal lives and its surroundings, both living and non-living; the term includes the presence of a group of particular environmental conditions surrounding an organism including air, water, soil, mineral elements, moisture, temperature, and topography.

Habitat Conservation Plan (HCP) – Under section 10(a)(2)(A) of the ESA, a planning document that is a mandatory component of an incidental take permit application, also known as a HCP.

Implementing Agreement – An agreement that legally binds the permittee to the requirements and responsibilities of a conservation and section 10 permit. It may assign the responsibility for planning, approving, and implementing the mitigation measures under the HCP.

Incidental take - Take of any federally listed wildlife species that is incidental to, but not the purpose of, otherwise lawful activities (see definition for "take") [ESA section 10(a)(1)(B)].

Incidental take permit – A permit that exempts a permittee from the take prohibition of section 9 of the ESA issued by the FWS pursuant to section 10(a)(1)(B) of the ESA.

Listed species – Species, including subspecies and distinct vertebrate populations, of the fish, wildlife, or plants listed as either endangered or threatened under section 4 of the ESA.

"Low-effect HCP's" – Those HCP's involving: 1) minor or negligible effects on federally listed, proposed, or candidate species and their habitats covered under the HCP; and 2) minor or negligible effects on other environmental values or resources. "Low-effect" incidental take permits are those permits that despite their authorization of some small level of incidental take, individually or cumulatively have a minor or negligible effect on species covered.

Mitigation – Under NEPA regulations, to moderate, reduce or alleviate the impacts of a proposed activity, including: 1) avoiding the impact by not taking a certain action or parts of an action; 2) minimizing impacts by limiting the degree or magnitude of the action; 3) rectifying the impact by repairing, rehabilitating or restoring the affected environment; 4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; 5) compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

National Environmental Policy Act (NEPA) – Federal legislation establishing national policy that environmental impacts will be evaluated as an integral part of any major Federal action. Requires the preparation of an EIS (Environmental Impact Statement) for all major Federal actions significantly affecting the quality of the human environment (42 U.S.C. 4321-4327).

Take – Under section 3(18) of the ESA, "… to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" with respect to federally listed endangered species of wildlife. Federal regulations provide the same taking prohibitions for threatened wildlife species [50 CFR 17.31(a)].

11.0 LITERATURE CITED

Bleich, B. C. 1973. Ecology of rodents at the United States Naval Weapons Station Seal Beach, Fallbrook Annex, San Diego County, California. M.A. thesis. California State University, Long Beach.

Bleich, B. C. 1977. *Dipodomys stephensi*. American Society of Mammalogists. Mammalian Species 73:1-3.

Bleich, V. C. and O. A. Schwartz. 1974. Western range extension of Stephens' kangaroo rat (*Dipodomys stephensi*), a threatened species. California Fish and Game 60:208-210.

Bontrager, D. R. 1973. Rodent ecology of the Santa Rosa Plateau, Riverside County, California. M.A. thesis. California State University, Long Beach, California.

Chambers Group. 2003. Biological Resources Constraints and Permitting Requirements for the Lockheed Beaumont 1 and Beaumont 2 Sites in Riverside County, California, March 24, 2003.

Dudek & Associates. 1998. Stephens' kangaroo rat assessment for Montecito Ranch, San Diego County, California.

ERCE. 1990. Eastside Reservoir Project. Riverside County, California. Stephens' Kangaroo Rat survey. Prepared for Metropolitan Water District of Southern California.

Goldingay, R. L. and M. V. Price. 1997. Influence of season and a sympatric congener on habitat use by Stephens' kangaroo rat. Conservation Biology 11(3):708-717.

Grinnell, J. 1922. A geographical study of the kangaroo rats of California. Univ. Calif. Publ. Zool. 24:1-124

Grinnell, J. 1933. Review of the recent mammal fauna of California. Univ. California Publ. Zool. 40:71-234.

Grout, Daniel J. 1991, 1992, 1998, 1999, 2000, 2003, 2004. Field notes from biological surveys and SKR surveys conducted on the Potrero Creek Property. Beaumont, California.

Hall, E. R. 1981. The Mammals of North America. Second Edition. Volumes I and II. John Wiley & Sons, Inc. New York.

Lackey, J. A. 1967. Biosystematics of *Heermanni* group kangaroo rats in southern California. Transaction of the San Diego Society of Natural History 14(22):313-344.

Lowe, M. 1997. Diet of Stephens' kangaroo rat, *Dipodomys stephensi*. The Southwestern Naturalist 42(3):358-361.

McClenaghan, Jr., L. R. and E. Taylor. 1993. Temporal and spatial patterns of demographics in *Dipodomys stephensi* from Riverside County, California. Report to Riverside County Habitat Conservation Agency.

Metcalf, A. E., L. Nunney, and B. C. Hyman. 2001. Geographic patterns of genetic differentiation within the restricted range of the endangered Stephens' kangaroo rat, *Dipodomys stephensi*.

Montgomery, S.J. 1991. Assessment of Potential Habitat Modification Methods Designed to Benefit Stephens' Kangaroo Rats on the Potrero Creek Property. Riverside County, California. Prepared for PSBS and Doug Wood and Associates. June 3, 1991.

_____. 1992. Stephens' kangaroo rat survey on the Lockheed Potrero Creek property, Beaumont, California. Prepared for Douglas Wood Associates. Newport Beach, California.

_____. 1995a. Stephens' kangaroo rat survey on the Lockheed Potrero Creek property, Beaumont, California. Prepared for Douglas Wood Associates and Langdon Wilson Architects and Planners. Newport Beach, California.

_____. 1995b. Stephens' kangaroo rat survey on the Lockheed Laborde Canyon property, Beaumont, California. Prepared for Douglas Wood Associates. Newport Beach, California.

O'Farrell, M. J. 1990. Stephens' kangaroo rat: Natural history, distribution, and current status. Memoirs of the Natural History Foundation of Orange County 3:78-84

O'Farrell, M. J. and W. A. Clark. 1987. Habitat utilization by Stephens' kangaroo rat (*Dipodomys stephensi*). Report to WESTEC Services, San Diego, California.

O'Farrell, M. J and C. E. Uptain. 1989. Assessment of population and habitat status of the Stephens' kangaroo rat (*Dipodomys stephensi)*. Report to the State of California, The Resources Agency, Department of Fish and Game, Wildlife Management Division

O'Farrell, M. J., S. M. Juarez, and C. E. Uptain. 1986. An addition to the known range of Stephens' kangaroo rat, *Dipodomys stephensi*, in San Diego County, California. California Fish and Game 72:187-189.

Ogden Environmental and Energy Services Co., Inc. 1998. Stephens' kangaroo rat study for the Ramona Airport expansion project, Ramona, California.

Pacific Southwest Biological Services, Inc. 1983. Report of a biological survey and analysis of expected impacts of the Potrero Creek Project, Lockheed Corporation, Beaumont, California. Prepared for Donald A. Cotton Assoc. and Albert C. Martin & Assoc.

_____. 1992. Biological assessment of the Potrero Creek site and an analysis of potential impacts of site development. Prepared for Douglas Wood and Associates. Newport Beach, California.

Price, M. V. and P. R. Endo. 1989. Estimating the distribution and abundance of a cryptic species, *Dipodomys stephensi* (Rodentia: Heteromyidae), and implications for management. Conservation Biology 3(3):293-301.

Price, M. V., R. L. Goldingay, L. S. Szychowski, and N. M. Waser. 1994. Managing habitat for the endangered Stephens' kangaroo rat (*Dipodomys stephensi*): Effects of shrub removal.

Price, M. V., N. M. Waser, K. E. Taylor, and K. L. Pluff. 1995. Fire as a management tool for Stephens' kangaroo rat and other small mammal species. Brushfires in California Wildlands: Ecology and Resource Management. Ed. J.E. Keeley and T. Scott. International Association of Wildland Fire, Fairfield, WA.

SJM Biological Consultants (SJMBC). 1998. 1998 Stephens' Kangaroo Rat Survey on the Lockheed Potrero Creek Property. Beaumont, California. Prepared for Douglas Wood and Associates. October 25, 1998.

_____. 2000. 1999-2000 Stephens' Kangaroo Rat Survey on the Lockheed Potrero Creek Property. Beaumont, California. Prepared for Douglas Wood and Associates. October 29, 2000.

Thomas, J. R. 1975. Distribution, population densities, and home range requirements of the Stephens' kangaroo rat (*Dipodomys stephensi*). M. A. thesis, California State Poly. Univ., Pomona.

U.S. Fish and Wildlife Service. 1987. Endangered and threatened wildlife and plants; determination of endangered status for Stephens' kangaroo rat. Federal Register 52:44453-44456.

U.S. Fish and Wildlife Service. 1988. Endangered and threatened wildlife and plants; determination of endangered Status for the Stephens' kangaroo rat. Federal Register 53:38465-38470.

U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration. 1996. Endangered Species Habitat Conservation Planning Handbook.

Williams, W.F., H. H. Genoways, and J. K. Braun. 1993. Taxonomy and systematics. *In* Genoways H. H. and J. H. Brown (eds), Biology of the Heteromyidae, pp. 38-196. Special Publication No. 10. The American Society of Mammalogists.

ATTACHMENT A

Upon execution of the Implementation Agreement, Lockheed Martin Corporation (applicant) will, subject to approval of its Vice President of Energy, Environment, Safety, and Health (VP, EESH) and Corporate Controller appropriate the additional funds necessary to implement its obligations under the Low-Effect Habitat Conservation Plan (HCP). Funds have been budgeted and are available for expenditure in 2005 and the budget has been approved by applicant's VP, EESH and Corporate Controller. At this time, applicant estimates that approximately $102,000 ($69,000 for Site 1 and $33,000for Site 2) of its approved budget amount will ultimately be dedicated for implementation of the HCP. The estimated costs would be allocated as follows:

Potrero Creek Site (Site 1)

1. Agency Negotiations for Beaumont Potrero Site – include arranging, preparing for, and attending meetings and teleconference calls with the United States Fish and Wildlife Service (USFWS) and / or California Department of Fish and Game (CDFG) to periodically discuss the implementation of the Low-Effect HCP and address any issues and emergencies that may arise. Applicant estimates three meetings / teleconference calls and one meeting at the site a year…….....**$8,492**

2. Field Activities – Field activities will include the Stephens Kangaroo Rat (SKR) surveys conducted by a Section 10 (a) permitted biologist as required by the Low-Effect HCP and generation of supporting documentation such as photographs, daily logs, and monitoring notes. Additionally, mitigation consisting of refilling boreholes and smoothing of soils disturbed during investigation activities will be conducted...…….**$41,824**

3. Reporting - As required by the HCP, annual monitoring reports will be prepared by the Section 10 (a) permitted biologist and submitted to USFWS and CDFG. The reports will specify the acreage of annual impact to SKR, the results of the SKR monitoring program, a statement of compliance or noncompliance, and will include photographs and other pertinent supporting documentation. Additionally, the annual reports for the first and last years of the field work covered by the HCP will include the findings of the initial and final SKR surveys, respectively……..……...**$19,087**

Laborde Canyon Site (Site 2)

1. Agency Negotiations for Beaumont Laborde Canyon Site – Agency negotiations include arranging, preparing for, and attending meetings and teleconference calls with the USFWS and / or CDFG to periodically discuss the implementation of the HCP and address any issues and emergencies that may arise. Applicant estimates three meetings / teleconference calls and one meeting at the site a year…….....**$8,924**

2. Field Activities – Field activities will include the initial and final SKR surveys conducted by a Section 10 (a) permitted biologist as required by the HCP and generation of supporting documentation such as photographs, daily logs, and monitoring notes. Additionally, mitigation consisting of refilling boreholes and smoothing of soils disturbed during investigation activities will be conducted…… ……..……..…….**$8,976**

3. Reporting - As required by the HCP, annual monitoring reports will be prepared by the Section 10 (a) permitted biologist and submitted to USFWS and CDFG. The reports will specify the acreage of annual impact to SKR, the results of the SKR monitoring program, a statement of compliance or noncompliance, and will include photographs and other pertinent supporting documentation. Additionally, the annual reports for the first and last years of the field work covered by the HCP will include the findings of the initial and final SKR surveys, respectively.……...……..…...**$14,719**